

BC

CONSTANCY OF THE VALENCY ANGLES OF THE CARBON TETRAHEDRON.  
Dipole moments of stereoisomers of *trans*-1,2-dichloro-3,4-butene.  
G. P. Michailov and D. V. Tschitschenko (*Acta Physicochim.*  
*U.R.S.S.*, 1940, 12, 129-136). — The dipole moments of the  
lower- and higher-boiling isomerides of *trans*-1,2-dichloro-3,4-butene  
are 0.00 and 2.41 D., respectively, confirming that the latter  
is the *cis* isomeride. The val. 2.41 D. is in agreement with  
that calc. on the assumption that there is no deformation of  
the valency angle. Recorded data are compared to show  
that in aromatic and ethylenic derivatives the higher-boiling  
isomeride has the greater dipole moment. F. J. G.

ASTM-SLA METALLURGICAL LITERATURE CLASSIFICATION

BC

A-1

Processes and Properties Index

Consistency of the valency angles of the carbon tetrahedron. Dipole moments of stereo-isomeric  $\beta$ -dichloro- $\Delta^4$ -butenes. G. P. MICHAILOV and D. V. TISCHTSCHENKO (J. Gen. Chem. Russ., 1939, 9, 782-787).—In disubstituted ethylenic and aromatic compounds the isomeride of higher b.p. has the higher dipole moment.  $\mu$  of *cis*-( $\text{CMcCl}$ ), calc. from that of *cis*-( $\text{CHCl}$ )<sub>2</sub> on the assumption that deformation of the valency angles is absent agrees well with that found experimentally. R. T.

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND CROSS										3RD AND 4TH CROSS									
PROCEDURES AND PROPERTIES INDEX																			
<p>BC</p> <p>Catalytic hydrolysis of chlorobenzene by steam.  D. V. TROITSKIY and A. M. TACHURAKOV (J. Appl.  Chem. Russ., 1934, 7, 764-769).—PhOH is obtained  in 80% yield by passing PhCl and steam over Holmes'  SiO<sub>2</sub> gel (R. 1934, 436) containing 10% of Cu at 550°.  100% yields can be obtained by repeating the cycle  with the unchanged PhCl from the first operation.  R. T.</p>																			
<p>8-II-1</p>																			
1ST AND 2ND CROSS										3RD AND 4TH CROSS									
ASM-31A METALLURGICAL LITERATURE CLASSIFICATION																			
1ST AND 2ND CROSS										3RD AND 4TH CROSS									
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[illegible]

BC

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

Aliphatic chloro-derivatives. VI. Reactivity of polychlorides of the allyl type. D. V. TICHITSCHENKO. VII. Chlorination of *sec*-butyl chloride. VIII. Chlorination of  $\alpha$ -chlorobutane. D. V. TICHITSCHENKO and A. TSCHUMBAROV. IX. Inductive effect and order of substitution of hydrogen by chlorine atoms in saturated hydrocarbons and their chloro-derivatives. D. V. TICHITSCHENKO (J. Gen. Chem. Russ., 1937, 7, 658-662, 663-666, 893-896, 897-900).—VI. The products of hydrolysis with an aq. suspension of  $\text{CaCO}_3$  of  $\text{CMeClCH}_2\text{CH}_2\text{Cl}$  (80°; 7 hr.) are chiefly  $\text{OH-CH}_2\text{-CH}_2\text{CMeCl}$ , with  $\text{CH}_3\text{-CH-COMe}$ , and of *cis*- and *trans*- $\text{CHMe.OCl-CH}_2\text{Cl}$  (90°; 38 hr.) are  $\beta$ -chloro- $\Delta^8$ -buten- $\alpha$ -ol, b.p. 52-53°/19 mm. ( $\alpha$ -naphthylurethane, m.p. 96-98°), and  $\gamma$ -chloro- $\Delta^8$ -buten- $\beta$ -ol, b.p. 47-48°/19 mm. ( $\alpha$ -naphthylurethane, m.p. 92-92.5°), whilst  $\text{CH}_2\text{-Cl-CHCl-CH}_2\text{Cl}$  is not hydrolyzed under these conditions. It is concluded that the presence of  $\alpha$ -Cl reduces the mobility of other Cl atoms, and that  $\alpha\gamma$ -substitution abolishes reactivity completely.

VII.  $\text{CHMeEtCl}$  and  $\text{Cl}_2$  yield  $\alpha\beta$ - (I),  $\alpha\gamma$ - (II),  $\beta\gamma$ - (III), and  $\beta\delta$ -dichlorobutane (IV); Meyer's rule does not therefore apply to this case. (II), but not (I), is readily hydrolysed to butanediol by aq.  $\text{K}_2\text{CO}_3$ . (III) and (IV) yield  $\text{CMeClCHMe}$  when similarly hydrolysed.

VIII. The mixture of dichlorides obtained from  $\text{Bu-Cl}$  and  $\text{Cl}_2$  contains  $\alpha\alpha$ - 3,  $\alpha\beta$ - 17,  $\alpha\gamma$ - 50, and  $\alpha\delta$ -dichlorobutane 25%. Meyer's rule is not followed in this case.

IX. The readiness with which H atoms in primary, *sec.*-, and *tert.*-hydrocarbons are replaced by Cl varies according to the structure of the hydrocarbon, and the no. and position of Cl already present. The results are explained on the basis of the negative and positive induction effects of Cl and alkyl radicals respectively.

R. T.

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COMMON ELEMENTS

OPEN

MATERIALS INDEX

458-55A METALLURGICAL LITERATURE CLASSIFICATION

SCHEMATIC

SCHEMATIC

RELATIONS

RELATIONS

TISCHER, J. ; VIHAN, J.

Testing the expanding concrete while concreting a tunnel vault. p. 18.

ZELEZNICNI DOPRAVA A TECHNIKA. (Ministerstvo dopravy) Praha, Czechoslovakia.  
Vol. 7, no. 1, 1959.

Monthly List of East European Accessions (EEAI) IC, Vol. 8, No. 11,  
November 1959.

Uncl.

TISCHER, J.

Some methods of improving unwallied rock cuts and old tunnel walls.

p. 66 (Železniční Technika. Vol. 5, no. 3, Mar. 1957, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2,  
February 1958

TISCHER, J.

Colloidal mortar and its use in tunnel engineering. p. 204. (Inzenyrske Stavby, Vol. 5, No. 4, Apr. 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 8, Aug 1957. Uncl.



TISCHER, J.

Rebuilding tracks in enlarged railroad tunnels.

P. 218 (Železniční Technika) Vol. 5, No. 9, Sept. 1957, Czechoslovakia

SO: MONTHLY INDEX OF EAST EUROPEAN ASSOCIATIONS (MEAI) Vol. 7, NO. 1, JAN. 1958

Tischer, J.

Prepacked concrete and potentialities for its use in tunnel construction, p. 181. INZENYRSKE STAVBY. (Ministerstvo stavebnictvi) Praha. Vol. 4, no. 4, Apr. 1956.

Source: EEAL LC Vol. 5, No. 10 Oct. 1956

TISCHER, Z.

"Soft magnetic materials of Soviet production." P. 131.

SEDLOVACI TECHNIKA. (Ministerstvo strojirenstvi). Praha, Czechoslovakia,  
Vol. 7, No. 4, Apr. 1959.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 8,  
August 1959.  
Uncla.

Tischer, Z.

Tischer, Z. Thermal treatment of magnetically soft materials. p. 331.  
W. New kinds of phonograph records. p. 332.

Vol. 4, no. 11, Nov. 1956  
SDELOVACI TECHNIKA  
TECHNOLOGY  
Czechoslovakia

So. East European Accessions, Vol. 6, No. 5, May 1957

TISCHIER, M.

TISCHIER, M. the complex mechanization of wheat harvesting. p. 6

Vol. 11, no. 12, June 1956  
MAGYAR MEZAGAZDASAG  
AGRICULTURE  
Budapest, Hungary

SO:: EAST EUROPEAN ACCESSIONS, VOL, 6, no. 3, March 1957

TISCHLER, C

HUTTMANN, A.; MOSOIU, G.; BAROUHOGLU, B.; STEFANESCU, C.; TISCHLER, C.

Rheumatism in a forest environment. Probl. reumat., Bucur. 4:  
201-212 1956.

(RHEUMATISM

in forest workers in Rumania, etiol. & incidence)

(OCCUPATIONAL DISEASES

rheum. in forest workers in Rumania, etiol. & incidence)

TISCHLER, L.

Correction of the production of spinning mills in the case of yarn-count variations. p. 423.

MAGYAR TEXTILTECHNIKA. (Textilipari Muszaki es Tudomanyos Egyesulet)  
Budapest, Hungary, Vol. 10, no. 11/12, Dec. 1958.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 8,  
August 1959.  
Uncla.

TISCHLER, M.

Agriculture

"MAGYAR MEZOGAZDASAG"

Harvesting sugar beets by machine. p. 6

Vol. 10, No. 10, Oct. 1955

Monthly List of East European Accessions (EEAI), LC, Vol. 10, No. 10, Oct. 1955  
Uncl.



TISCHLER, M.

Problems of mechanization in regard to the harvesting of hay. p. 12. (Magyar  
Mezogazdasag, Vol. 11, no. 3, Feb. 1956 Budapest)

SO: Monthly List of East European Accession (EEAL) LC, Vol. 6, no. 7, July 1957. Uncl.

TISCHLER, P.

TISCHLER, M. Harvesting hay with machines. p. 12.

Vol. 11, no. 11, June 1956

MAGYAR MELOKARDALAG

AGRICULTURE

Budapest, Hungary

So: East European Accession, Vol. 1, no. 1, 1957

TISCHLER, Marton

Increasing working velocity of agricultural machines, and the automation of working processes. Jarmu mezo gep 9 no.11:428-434 N '62.

1. Koho- es Gepipari Miniszterium Mezogepfejlesztési Intezet osztalyvezetoje.

TISCHLER, M.

TISCHLER, M. Mechanization of the harvesting of corn for silage and corn stalks. p. 16.

Vol. 11, no. 15/16, Aug. 1956

MAGYAR MEZOGAZDASAG

AGRICULTURE

Budapest, Hungary

So: East European Accession, Vol. 6, no. 5, May 1957

TISCHLER, Marton

New ways of mechanization in agriculture. Jarmu mezo gap 6 no.6:163-170 '59.

1. Koho- es Gepipari Miniszterium Mezogepfejlesztési Intezet.

TISCHLER, Marton

Technical data of modern harvester-threshers and their specific indexes necessary for comparison. Jarmu Mezo gep 10 no.8:303-308 Ag '63.

1. Koho- es Gepipari Miniszterium Mezogepfejlesztési Intezet.

JACINA, J.; TISCHLER, V.; GALLOVA, S.

Metabolism of carbohydrates in dystrophic twins. Cesk. pediat. 12 no.8:  
682-687 5 Aug 57.

1. Katedra starostlivosti o dieta PLUK v Kosiciach, veduci doc. Dr  
F. Demant.

(TWINS, dis.

dystrophia, carbohydrate metab. (Cz))

(CARBOHYDRATES, metab.

in dystrophic twins (Cz))

TISCHLER, V.

DEMANT, F., Doc., Dr.; NEUBAUER, Ed., doc., Dr.; SRSEN, St., as., Dr.;  
TISCHLER, V., as., Dr.;

Question of the internal environment of healthy newborn.  
Cesk. pediat. 12 no.5-6:430-435 May-June 57.

1. Detska klinika lekarskej fakulty KU v Kosiciach (prednosta  
doc. Dr. F. Demant) a nefrologické labororium internej kliniky  
(prednosta doc., Dr. F. Por).  
(INFANT, NEWBORN, physiol.  
internal environment (Cz))



PAVKOVCEKOVA, O.; JACINA, J.; TISCHLER, V.

Infantile form of Gaucher's disease in a 13-month-old child.  
Cesk. ped. 20 no.12:1092-1096 D ' 65.

1. Katedra starostlivosti o dieta Lekarskej fakulty University  
P.J. Safarika v Kosiciach (veduci - prof. dr. F. Demant).

TISEL'SKIY, A.P.

Investigations of polycyclic thiazoles. Part 2: Substituted 4,5,4',5'-  
dibenzothiacarbocyanines of symmetric structure. Ukr.khim.zhur. 24  
no.5:648-652 ' 58.  
(MIRA 12:1)

1. Khar'kovskiy politekhnicheskij institut imeni V.I. Lenina, kafedra  
organicheskoy khimii.  
(Thiacarbocyanine)

TISEL'SKIY, A.P.

Investigation of the polycyclic thiazol series. Part 3: Symmetric carbocyanines of 2-methyl-6-dimethylamino-4,5-benzobenzthiazole. Ukr. khim.zhur. 24 no.6:749-756 '58.  
(MIRA 12:3)

1. Khar'kovskiy politekhnicheskoy institut im. V.I. Lenina, kafedra organicheskoy khimii.  
(Benzothiazole) (Cyanine dyes)

COMMON ELEMENTS										PROCESSES AND PROPERTIES INDEX										1ST AND 2ND GROUPS										3RD AND 4TH GROUPS									
<p>CA</p> <p>The <i>N</i>-alkyl- and the <i>N</i>-arylmorpholones (2-ketotetrahydro-1,4-oxazines). A. I. Kiplanov, A. P. Tisel'ski and I. K. Ushenko. <i>Trudy Khar'kov. Gosudarst. Univ.</i> 3, 45-52(1938); <i>Khim. Referat. Zhur.</i> 2, No. 4, 54-5(1939). —By boiling the alkyl- and the arylaminoethanols with <math>\text{ClCH}_2\text{CO}_2\text{Na}</math> were obtained Me, Et, Pr, Iso-Pr, Iso-Am, PhCH<sub>2</sub>, Ph and <i>o</i>- and <i>p</i>-MeC<sub>6</sub>H<sub>4</sub> derivs. of morpholone. In case of the aryl derivs. morpholones are formed directly:</p> $\text{ArNHCH}_2\text{CH}_2\text{OH} + \text{ClCH}_2\text{CO}_2\text{Na} \rightarrow \text{CH}_2\text{CH}_2\text{NAr} \cdot \text{CH}_2\text{CO}_2\text{O} + \text{NaCl} + \text{H}_2\text{O} \text{ (I).}$ <p>In case of the alkyl-</p>										<p>aminoethanols the hydroxyalkylamino acids are formed first and are dehydrated to the corresponding alkylmorpholones by distn. <i>in vacuo</i>. The alkylmorpholones are easily hydrolyzed. By the action of concd. NH<sub>3</sub> on the arylmorpholones the amino acids, <i>N</i>-aryl-<i>N</i>-(<i>o</i>-hydroxyethylamino)acetic acids, were obtained. The product of the condensation of <i>N</i>-phenylmorpholone with Mehlert's ketone was obtained in the form of an amorphous iodide.</p> <p>Its probable structure is <math>\text{Me}_2\text{NC}_6\text{H}_4\text{CR} \cdot \text{C}_6\text{H}_4 \cdot \text{NMe}_2 + \text{I}</math> (<math>\text{R} = \text{p-CH}_2\text{CH}_2\text{O.CO.CH}_2\text{NC}_6\text{H}_4\text{-}</math>) (II). For the prepn of <i>N</i>-methylmorpholine 17 g. of <math>\text{ClCH}_2\text{CO}_2\text{H}</math> in 35 cc. of water are neutralized with concd. NaOH, boiled for 7 hrs. with 13.5 g. of <math>\text{MeNHCH}_2\text{CH}_2\text{OH}</math>, evapd. on a water bath and the residue distd. <i>in vacuo</i>. The yield was 8.4 g., colorless liquid, b<sub>10</sub> 100-2°, b<sub>2</sub> 233°. [Knorr, <i>Ann.</i> 307, 199 (1899).] A yield of 14 g. of <i>N</i>-ethylmorpholine (14 g. from 15.6 g. of <math>\text{EtNHCH}_2\text{CH}_2\text{OH}</math> [Knorr and Schmidt, <i>Ber.</i> 31, 1073(1898)], colorless mobile liquid, b<sub>10</sub> 97.9°. By hydrolysis was obtained <i>N</i>-ethyl-<i>N</i>-(<i>o</i>-hydroxyethylamino)acetic acid, colorless crystals. A yield of 8 g. of <i>N</i>-propylmorpholine was obtained from 17 g. of propylethanolamine, b<sub>10</sub> 139-6°, as a dense colorless liquid. <i>N</i>-Propyl-<i>N</i>-(<i>o</i>-hydroxyethylamino)acetic acid is a non-crystg sirup. The Cu salt (<math>\text{C}_{11}\text{H}_{19}\text{O}_4\text{NCu} \cdot 3\text{H}_2\text{O}</math>) forms dark blue needles. A yield of 2.5 g. of <i>N</i>-isopropylmorpholine was</p>										<p>10</p>																			
<p>ASB-3LA METALLURGICAL LITERATURE CLASSIFICATION</p>										<p>EXTRACTS</p>																													

obtained from 7 g. of isopropylaminoethanol, b. 78-80°. A yield of 5 g. of *N*-isopropylmorpholine was obtained from 11 g. of isopropylaminoethanol, b. 150-5°. A yield of 11 g. of *N*-benzylmorpholine was obtained from 12 g. of benzylaminoethanol (boiling for 15 hrs.), b. 158-61°. *N*-Phenyl-*N*, $\beta$ -hydroxyethylaminoacetic acid was obtained from *N*-phenylmorpholine (III) [Kiprianov, C. A. 24, 1084] with concd.  $\text{NH}_4\text{OH}$ . The methyl ether of *N*-phenyl-*N*, $\beta$ -hydroxyethylaminoacetic acid yields III during the distn. *in vacuo*. From the reaction of 105 g. of *o*-toluidine and 14.7 g. of ethylene oxide in a sealed tube at 100° for 8 hrs. was obtained *N*, $\beta$ -hydroxyethyl *o*-toluidine (IV) in the form of a yellow oil, b. 168-71°. By boiling 32.2 g. of IV for 8 hrs. *N*, $\beta$ -tolylmorpholine, b. 190-7°, was obtained. *N*, $\beta$ -Hydroxyethyl-*N*, $\beta$ -tolylaminoacetic acid was obtained in the form of colorless needles, m. 113-14°. From *p*-toluidine and ethylene oxide was obtained *N*, $\beta$ -hydroxyethyl-*p*-toluidine (V), b. 183-92° and m. 39°. From V white crystals of *N*, $\beta$ -tolylmorpholine were obtained, m. 74-8° (sealed tube). White crystals of *N*, $\beta$ -tolyl-*N*, $\beta$ -hydroxyethylaminoacetic acid were obtained from alc., m. 170-2°.

W. R. Hott

TISENKO, N.G.

Improved tensometers for models made of organic glass. Zav.lab.  
28 no.6:736-738 '62. (MIRA 15:5)

1. Tsentral'nyy nauchno-issledovatel'skiy kotloturbinnyy  
institut imeni I.I. Polzunova.  
(Strain gauges)

TISENKO, N.G.

Thermocompensation of a resistance-strip strain gauge.  
Izm.tekh. no.4:23-25 Ap '60. (MIRA 13:8)  
(Strain gauges)

NEKHENDZI, Ye.Yu.; TISENKO, N.G.

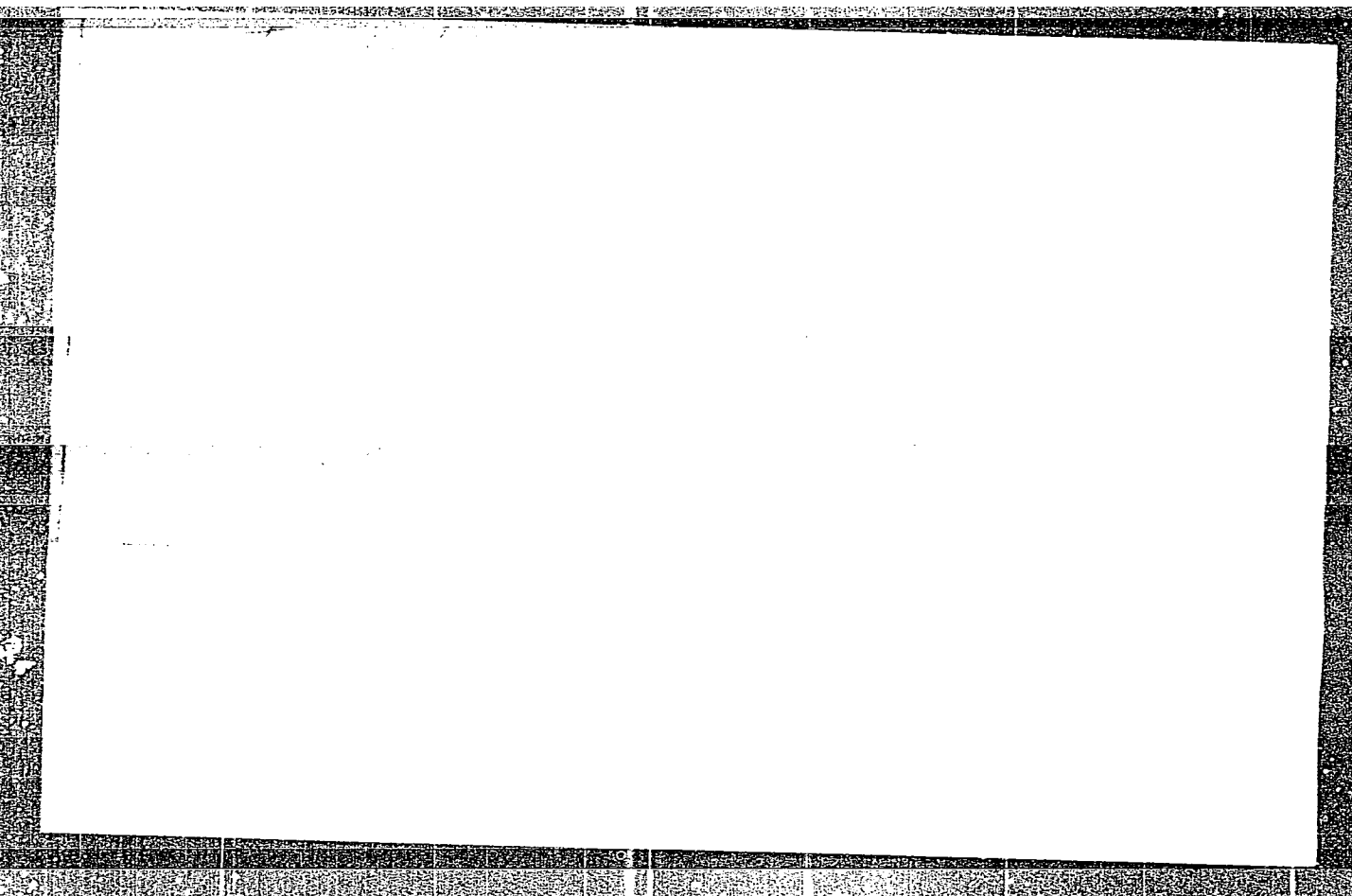
Tensiometers for measuring static deformations up to 450° temperature.  
Zav. lab. 24 no. 7:872-874 '58. (MIRA 11:7)

1. TSentral'nyy kotloturbinnyy institut im. I.I.Polzunova.  
(Tensiometers)



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2  
Pneumatic Sensitivity

TISENKO, N.G., kandidat tekhnicheskikh nauk; MARGOLIN, Yu.M., kandidat tekhnicheskikh.

Testing materials for wire electric-resistance tensiometers. Vest.mash. 33  
no.7:38-41 J1 '53. (MLRA 6:8)

1. Tsentral'nyy nauchno-issledovatel'skiy kotloturbinnyy institut im. I.I. Polsunova.  
(Electric resistors)

TISENKO, N.G., kandidat tekhnicheskikh nauk; MARGOLIN, Yu.M., kandidat tekhnicheskikh nauk.

Heat treatment of constantan for high temperature wire tensometers used in electric resistance. Vest. mash. 33 no.12:71-74 D '53.

(MLRA 6:12)

1. Tsentral'nyy nauchno-issledovatel'skiy kotloturbinnyy institut im. I.I.Polsunova.

(Copper-nickel alloys) (Electric resistance)

TISGER, R.M., inzh.

Organization of the operation of protection equipment and automatic control and remote control systems in electric power distribution networks. Elek. sta. 36 no.6:84 Jo '65. (MIRA 18:7)

1. Azglavenergo.

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755810015-8"

PROCEEDINGS OF THE 10th International Symposium on Chemical Technology. Chemical Products and Their Applications. Fats and Oils. Waxes. Soaps and Detergents. Flotation Agents.

Abs Jour: Ref Zhur-Khimiya, 1959, No 4, 13347.

Author : Kornhauser, Aleksandra; Perpar, Marija, Tiser, Vida.  
Inst : Not given.  
Title : Oil of Ergot.

Orig Pub: Acta pharmac. jugosl., 1956, 6, No 1, 33-38.

Abstract: Results of a study of the extraction rate of oil from different varieties of ergot (from Yugoslavia) are given. Analytical characteristics of oil of ergot are given. -- From the authors' resume.

USSR / Farm Animals. Domestic Fowls.

U-10

Abs Jour : Ref Zhur - Biologiya, No 16, 1957, 72203

Author : Tishchenko

Title : A New Breed of Geese.

Orig Pub : Soz. Tvarinitstvo, 1956, No 12, 41-42

Abstract : The crossing of "Romen" Geese with "Tulus" geese produced a new breed of geese, large grey (confirmed on 20 August 1956) which is wide-spread in Ukraine. This group is adequately consolidated. Adult geese weigh 5.7-6.2 kg, ganders 7 kg. Egg laying 37-40 eggs per year. The egg-sitting instinct is very weak in these geese.

Card : 1/1

- 68 -

175 HCHENKO, A.I.

FISHCHENKO, A.I.

From the plan of the "State Commission of the Electrification of Russia (GOELRO)" to the general plan for railroad electrification. Zhel. dor. transp. 39 no.12:8-14 D '57. (MIRA 11:1)

1. Nachal'nik Glavnogo upravleniya elektrifikatsii i energeticheskogo khozyaystva Ministerstva putey soobshcheniya.  
(Railroads--Electrification)

USSR/Cultivated Plants - Grains.

11.

Abs Jour : Ref Zhur - Biol., No 10, 1958, 44051

Author : Belash, T.I., Tishchenko, A.M., Shostak, O.F.

Inst : Moscow Selection Station.

Title : Peculiarities of Grain Corn Agrotechny the Southern Rayons of Moscow Oblast.

Orig Pub : Zemledeliye, 1957, No 5, 40-44.

Abstract : This study was made at the Moscow selection station. In cultivating corn in heavy structureless soils it is particularly important to provide for the good soil aeration. Good predecessors of corn are clover and winter wheat. It is recommended that one sow when the soil is ready either at the end of April or in the middle of the end of May, but not later than June 1. The best depth for sowing is 6 cm. The highest percentage of ripened seedlings

Card 1/2



USSR/Cultivated Plants - Grains.

11.

Abs Jour : R. f Zhur - Biol., No 10, 1958, 44051

was obtained by sowing on an area of 45 x 45 and leaving 1-2 plants per bunch. Superphosphate was introduced at the time of the first cultivation and one week before tasseling. Supplementary pollination and stamping out of weeds increase the crop of seedlings. Under the conditions prevailing in Moscow Oblast varieties such as Beloyarsky millet, Pionerka Sevara, Chichinskaya 1, Slavgorodskaya 270 and inter-varietal hybrids reach maturity. -- V.A. Vnuchkova

Card 2/2

- 32 -

NEKHENDZI, Ye.Yu.; TISENKO, N.G.

Strain sensitivity of a conductor and glued wire under plane stress. Zav.lab. 22 no.8:982-989 Ag '56. (MLBA 9:11)

1. TSentral'nyy nauchno-issledovatel'skiy kotloturbinnyy institut imeni I.I.Polzunova.

(Stresses and strains--Measurements)

COMMON ELEMENTS																									
COMMON TABLETS INDEX													COMMON TABLETS INDEX												
<p>CP</p> <p>Pathological processes induced by insufficient food-protein supply. III. Morphological changes in the organs. M. M. Tischenhausen and L. A. Cherkas. <i>Bull. Acad. Med. USSR. U. R. S. S. 4, 352-5(1937) (in English).</i> Adult rats on a diet of 200 g. of starch, 35 g. of sunflower oil, 10 g. of cod-liver oil, 10 g. of McCollum's salt mixt. and 400 g. of H<sub>2</sub>O given <i>ad libitum</i> with 0.5 g. of yeast (contg. 4 mg. of N per day as a source of the vitamins of the B group) developed parenchymal degeneration and granular disintegration of the epithelium of the kidneys, with urinary casts in cases of prolonged protein starvation. A distinct picture of glomerulo-tubular nephritis is obtained. An increase in fat deposition in the liver was observed but no correlation could be noted between the degree of fat deposition and protein starvation.</p> <p>S. A. Kariala</p>																									
<p>ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																									
<p>1ST AND 2ND ORDER</p>																									

TISHAKOV, D.R.; SLYUSAR', N.P.

Specialized production of forgings. Biul. tekhn.-ekon. inform.  
Gos. nauch.-issl. inst. nauch. i tekhn. inform. 18 no.10:21-22  
0 '65. (MIRA 18:12)

ACC NR: AT7001906

(A)

SOURCE CODE: UR/3000/66/000/013/0133/0137

AUTHOR: Astashov, A. F. (Engineer); Tishayev, S. I. (Engineer)

ORG: none

TITLE: Requirements of die material for liquid-steel forging

SOURCE: Moscow. Eksperimental'nyy nauchno-issledovatel'skiy institut kuznechnopressovogo mashinostroyeniya. [Nauchnyye trudy] no. 13, 1966. Shtampovyye stali (Tool steels), 133-137

TOPIC TAGS: *molden metal forging, die, forging machinery, tool steel, mechanical property,*  
~~liquid~~ steel forging, forging die, forging die steel, hot die steel / 3Kh2V8 steel, EI-959 steel, EI-765 steel

ABSTRACT: The effect of forging conditions on the service life of 20, 3Kh2V8, EI-959, and EI-765 steel dies used for liquid-steel forging has been investigated. Experimental forging of 5-kg 45-steel parts showed that the service life of dies depends primarily on the temperature, heat conductivity, coefficient of expansion, elasticity modulus, and shape of dies and forgings. 3Kh2V8 and EI-959 steel dies were found to have sufficiently high mechanical properties at temperatures up to 700C, but in forging liquid steel they have a tendency to crack formation after 100—150 (top die) or 600—640 (bottom die) cycles. Cracks were also observed in EI-765 steel dies after 70—100 cycles and

Card 1/2

ACC NR: AT7001906

20 steel dies were distorted after 40—50 cycles. To ensure high service life of dies for liquid-steel forging, the steel must have a minimum yield strength of 350 Mn/m<sup>2</sup>, a hardness of HRC - 25 at temperatures up to 900—1000C, and satisfactory thermal—shock resistance. Orig. art. has: 1 table.

SUB CODE: 13// SUBM DATE: none/ ORIG REF: 001/ OTH REF: 001

Card. 2/2

ACC NR: AP5028994

MJW/JD/HW

SOURCE CODE: UR/0182/65/000/009/0011/0013

AUTHOR: Deordiyev, N. T.; Astashov, A. F.; Tishayev, S. I.; Ryaskov, S. A.

ORG: none

TITLE: Temperature regime of die assembly during molten metal forging

SOURCE: Kuznechno-shtampovochnoye proizvodstvo, no. 9, 1965, 11-13

TOPIC TAGS: molten metal forging, die, hot die forging, temperature characteristic, ferrous alloy

ABSTRACT: One of the reasons for the slow industrial introduction of the molten metal forging of ferrous alloys (die casting at crystallization temperatures) is the low strength of the die assembly due to the extremely difficult conditions of its operation. In this connection, the authors experimentally investigated the effect of the principal technological parameters of the process (unit pressure, die-heating temperature prior to the filling of die with molten metal) and the weight of the blank itself on the temperature regime of the die assembly during the die casting of steel blanks. The die assembly was made of 3Kh2V8 steel and heat-treated to a hardness of  $H_{RC} = 44-46$ . Soot from an oil flame was used as the lubricant. Molten metal was poured into the die at 1580-1600°C; the pressure was 0-70 kg/mm<sup>2</sup>, the die was

Card 1/2

UDC: 621.984.1

L 23027-00

ACC NR: AP5028994

preheated to 340-360°C prior to the casting of solid-metal cylinders and 250-300°C prior to the casting of cupped blanks. The temperature regime of the die assembly during molten metal forging was measured with the aid of chromel-alumel thermocouples and recorded on a MPO-2 oscillograph. The experimental findings thus obtained warrant the following conclusions: 1. The principal process parameters (pressure, heating temperature of die assembly prior to filling with molten metal) and the weight of the forged blank exert a very considerable effect on the temperature regime of operation of the die assembly. 2. During the pressure-die casting of steel blanks the surface layers of the die assembly, consisting of a material with a thermal conductivity of 0.07-0.08 cal/cm-sec-deg (of the 3Kh2V8 steel type) become heated to high temperatures (as high as 800-850°C for dies and 950-1050°C for punches during cupping). 3. The zone of propagation of high temperatures over the cross sectional area of the die assembly during one cycle does not exceed 4-5 mm. The temperature drop over the cross sectional area of the die assembly reaches 100-200 deg/mm and the drop in heating rate, 150-300 deg/sec. Orig. art. has: 5 figures.

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 004/ OTH REF: 001

Card 2/2 h/



CA 7

Processes and Properties Index

Direct production of iron from ores. Yu. Tishchenko  
 Stal 1939, No. 2, 6-12; Khim. Referat. Zhur. 1939, No. 8,  
 72. - A study was made of gaseous and solid reducing  
 agents and of methods of operation. W. R. Henn

COMMON ELEMENTS

OPEN

WATERGAS INDEX

ASME-ISA METALLURGICAL LITERATURE CLASSIFICATION

REFLECTION

PROCESSES AND PROPERTIES INDEX																									
<p>5</p> <p>4</p> <p><b>Some Fundamental Questions Connected with the Production of Iron Directly from Ores.</b> Yu. Tishboyn. (Stal, 1930, No. 2, pp. 6-12). (In Russian). The author deals with the factors which have to be taken into account when considering the low-temperature reduction of iron ores, e.g., the reducing agent (hydrogen, carbon monoxide or mixtures of the two or natural gases rich in hydrogen; or solid reducing agents), suitable temperatures, the rate of reduction and the problem of regenerating the reducing agent. Possible methods of ensuring contact of the ore with the reducing agent and of the final separation of the metallic from the non-metallic phase are considered.</p> <p>AS 44-1.4 METALLURGICAL LITERATURE CLASSIFICATION</p>																									

TISBEIN, Iu. R.

KAMENSKII, U. A. and TISBEIN, Iu. R. Zheleznye rudy SSSR dlia bessemera, martena i tomasa: pod red. M.A. Pavlova i N.I. Svital'skogo. Leningrad, Glav. red. lit-ry po chernoi metallurgii 1935. 157 p.

NN

DLC: TN406.R9K3

SO: LC, Soviet Geography, Part I, 1951, Uncl.

<div style="display: flex; justify-content: space-between;"> <div> <p>COMMON ELEMENTS</p> <p>OPEN</p> <p>MATERIALS INDEX</p> </div> <div> <p>1st AND 2nd GROUPS</p> <p>PROPERTIES AND COMPOSITIONAL DATA</p> </div> </div>																									
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p><i>ca</i></p> </div> <div style="width: 65%;"> <p>Smelting pig iron from titanium magnetite. Vn R. Tishbein. <i>Steel. Met.</i> 6, 356 (1961). Trial blast-furnace runs were made with (a) coned, agglomerate contg. Fe 60, TiO<sub>2</sub> 3.5 and V<sub>2</sub>O<sub>5</sub> 0.43%, (b) untreated Kusin ore contg. Fe 53, TiO<sub>2</sub> 3.1, and V<sub>2</sub>O<sub>5</sub> 0.73%, and (c) untreated Kusin ore mixed with "salted" coke contg. 7% NaCl. Tests (a) and (b) gave a high recovery of V and low S in the pig iron. Test (c) resulted in a very liquid slag and a poor recovery of V and high S in the pig iron. Cl had a destructive effect on the furnace linings and fittings.</p> <p>H. W. Rathmann</p> </div> <div style="width: 5%; text-align: center;"> <p>9</p> </div> </div>																									
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p> <p>38011 17021000</p>																									
<p>100000 2 100000 100000 100000</p>																									

The dimensions of the coke-burning zone from the shape of the blast furnace. *Yul. R. Fishbein. Sirov. Met. O.* No. 4, 11-18 (1937); *Chem. Zvezdy* 1937, 1:143-144. If the initial  $O_2$  concn. in vol. % is represented by  $a$ , the amt. entering into reaction by  $x$ , the amt. converted into  $CO$  by reaction of the  $CO_2$  formed with  $C$  by  $y$ , then  $dx/dt = k_1(a - x)$  and  $dy/dt = k_2(x - y)$ . Also if  $k_1/k_2 = r$ , the max. amt. of  $CO_2$  present is given by  $CO_{2max} = [a/(1 + r)] [e^{(1+r)t} - 1]$ . The variation of the  $CO_2$  content of the gases with the time and with the distance from the end of the furnace is presented graphically. In an analogous manner, the  $O_2$  and  $CO$  concns can be represented as  $e$  functions. M. G. Moore

The effect of oxygen blast on the temperature distribution in the blast furnace. Yu. R. Tishbeln. *Investiya Otdeleniya Tekh. Nauk* 1939, No. 1, 65-80; *Khim. Referat. Zhur.* 1939, No. 7, 82. --The av. temps. of the gas in the region below 950° changed from 612° to 487° on increasing the O concn. of the blast from 21 to 30%. The enrichment of the blast to 30% O permits lowering the temp. of the blast by only 24°. By increasing the O content to a max. of 30% the expenditure of coke was reduced 8% when the intensity of combustion was const. An increase of the concn. of O in the blast increased the productivity of the furnace approx. 30%. In this case the decrease of fuel consumption did not exceed 4%. An increase of the intensity of combustion facilitated a saving in fuel, since the reduction of Si was decreased thereby. W R Henn

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

L 35943-66 EWP(t)/ETI IJP(c) JD

ACC NR: AP6027383

SOURCE CODE: CZ/0034/65/000/009/0679/0679

INVENTOR: Sauberlich, K. (Professor; Doctor; Engineer); Tischendorf, H. J. (Doctor; Engineer)

ORG: none

TITLE: Process for melting and reducing iron ores. Class 18, No PV 5002-62

SOURCE: Hutnicke listy, no. 9, 1965, 679

TOPIC TAGS: iron, metal melting, metallurgic process

ABSTRACT: The article is an abstract of Czechoslovak Patent Application Class 18 and 3/02, PV 5002-62, dated 29 Aug. 62. Priority 30 Aug. 61, East Germany. Gaseous, liquid or solid reducing agents may be used in the invention; the melting of the ore is conducted in the presence of limestone in an oxidizing atmosphere, and when the ore is melted, the reducing agent is propelled through the melt, whereby the ore is reduced and part of the reducing agent is burned by the oxygen present. The reduction of the iron ore is effected by forcing the reducing agent into the melt under conditions where it is atomized and provides a very strong agitation of the charge. The unused reduction agents are burned above the surface of the liquid by oxygen introduced at this point, and thereby provide the necessary heat; no exterior source of heat is required in the process. [JPRS]

SUB CODE: 11 / SUBM DATE: none

Card 1/1

TISHCHENKE, A. T.

SELECTION OF BLAST VELOCITY IN GASIFICATION OF PEAT CRUMBS. Tishchenke, A. T.  
(Za Ekon. Topliva (Fuel Econ.), Dec. 1951, 12-14). Laboratory experiments are  
recorded with peat particles 3 to 25 mm in diameter, a size which is produced as  
waste in machine moulding of peat blocks, and in transport and handling. Air velocity  
through a fixed bed was increased so as to form a fluidized bed, and the limit found  
at which particles of different sizes hover before being carried away with the  
blast. The blast velocity at the limit was about  $\sqrt{d/8}$  m/sec, where  $d$  is particle  
diameter in mm. The advantages of using maximum ~~blast~~ blast velocity in gas producers  
producers are emphasized. (L)



TISHCHENKE, A. T.

SELECTION OF BLAST VELOCITY IN GASIFICATION OF PEAT CRUMBS. Tishchenke, A. T.  
(Za Ekon. Topliva (Fuel Econ.), Dec. 1951, 12-17). Laboratory experiments are  
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waste in machine moulding of peat blocks, and in transport and handling. Air velocity  
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at which particles of different sizes hover before being carried away with the  
blast. The blast velocity at the limit was about  $\sqrt{d/8}$  m/sec, where d is particle  
diameter in mm. The advantages of using maximum blast velocity in gas producers  
producers are emphasized. (L)

TISHCHENKO, A., inzhener-podpolkovnik; CHMOSLYEV, A., inzhener-polkovnik;  
SHIMAKOV, F., inzhener-podpolkovnik

Park day, a day of technology. Tekh. i voruzh. no.4:51-56 Apr '61.  
(MIRA 17:9)

TISHCHENKO, A., letchik-istrebitel', Geroy Sovetskogo Soyuza

Above the blue line. Av.1 kosm. 45 no.4:33-86 Ap '63.

(MIRA 16:3)

(World War, 1939-1945--Aerial operations)

TISHCHENKO, A., zootekhnik.

Introduction of advanced practices should be under the inspection  
of the local government. Nauka i pered. op. v sel'khoz. 9 no.2:  
67-68 F '59. (MIRA 12:3)

1. Sovkhoz imeni Gor'kogo, Kavkazskogo rayona, Krasnodarskogo kraya.  
(Agriculture)

TISHCHENKO, A., polkovnik.

~~After the atomic blast.~~ Voenn. znaniya. 31 no.8:8-9 Ag '56. (MLRA 9:11)  
(Atomic warfare)

TISHCHENKO, A., podpolkovnik; LAYKOV, A., starshiy leytenant.

Judging small arm fire. Voen.vest.36 no.2:39-41 F '57.

(Shooting, Military)

(MLRA 10:3)

TI. HONENKO

YA 170T6

USSR/Biology - Sugar Beets  
Plants, Physiology  
May/Jun 50

"Increasing the Germination of Sugar Beet Seeds  
by Heating," A. Tishchenko, Seed Inspection,  
Ukrainian Main Sugar ADM, Vinnitsa

"Agrobiol" No 3, pp 142-145

Tests in 1945 at Rubtsovskiy sovkhos conducted  
on 122 hectares showed seed heated by warm air  
at 18-25° for 7-10 days in small lots of 1.5-2  
centners produced increases in germination of  
7-11% and increases in yield of 31 centners per

170T6

USSR/Biology - Sugar Beets (Contd) May/Jun 50

hectare. Tests in 1949 showed seed customarily  
having 60-65% germination, on heating for 5-7  
days at 25-30° produced average of 17% more  
germination, and seed having 70-75% germination  
under same conditions produced increases in  
germination of 9% on the average.

170T6

TISHCHENKO, A., mayor, starshiy instruktor

Political study group is a form of creative work. Komm. Vopr. 511  
1 no. 6: 65-69 Mr '61. (MIRA 14:8)

1. Politupravleniye Tikhookeanskogo flota.  
(Communist education)



UL'YANOV, G. (g.Gorodets, Gor'kovskoy oblasti); LIPNER, S. (Kherson);  
BARANOVA, M.; KHANSUVAROVA, F.; BARANOVA, M.; KRUGLOVA, O.  
(Murmansk); KUPTSOV, F. (Moskva); TISHCHENKO, A., Geroy  
Sotsialisticheskogo Truda

Kindergartens and nurseries should be placed under the control  
of women's committees. Rabotnitsa 40 no.6:14-15 Je '62.

(MIRA 16:3)

1. Predsedatel' zhenskogo soveta stroitel'stva Krasnoyarskoy  
gidroelekticheskoy stantsii (for Khansuvarova).
2. Predsedatel'  
zhenskogo soveta tralovogo flota, Murmansk (for Kruglova).
3. Predsedatel' pravleniya detskogo sada zhilishchno-  
ekspluatatsionnoy kontory No.10 Kiyevskogo rayona Moskvyy (for  
Kuptsov).
4. Predsedatel' zhenskogo soveta Novo-Kramatorskogo  
mashinostroitel'nogo zavoda (for Tishchenko).

(Kindergartens) (Nurseries)

BAKLANOV, V. (UB5DJI) (Donetsk); TISHCHENKO, A. (UT5SB) (Donetsk)

Shortwave receiver. Radio no. 12:21-24 D '64.

(MIRA 18:3)

TISHCHENKO, A.A.; SMIRNOV, V.I.

Conditions for the formation of selenite and sodium selenate during the sintering of silver selenide with soda ash. *Izv.vys.ucheb.zav.; tsvet.met.* 5 no.3:49-52 '62. (MIRA 15:11)

1. Ural'skiy politekhnicheskiy institut, kafedra metalurgii tyazhelykh metallov.

(Selenium--Metallurgy)

TISHCHENKO, A.A.; SMIRNOV, V.I., akademik

Thermodynamics and experimental investigation of the formation  
of sodium selenite and sodium selenate during copper selenide  
caking with soda ash. Dokl.AN SSSR 145 no.4:863-966 Ag '62.  
(MIRA 15:7)

1. Ural'skiy politekhnicheskii institut im. S.M.Kirova.
2. AN KazSSR (for Smirnov).  
(Copper selenide) (Selenium)

TISHCHENKO, A.A.; YATSENKO, A.A.

A group of communist labor. Veterinariia 41 no. 2: 10-12 F 4: 1.

1. Ispolnyayushchiy obyazannosti direktora cherkasskoy oblastnoy veterinarnoy laboratorii (for Tishchenko). 2. Predsedatel' mestnogo komiteta soveta professional'nykh organizatsiy Cherkasskoy oblasti (for Yatsenko).

S/020/62/145/004/023/024  
B101/B138

AUTHORS:

Tishchenko, A. A., and Smirnov, V. I., Academician AS KazSSR

TITLE:

Thermodynamics, and an experimental study, of the formation of sodium selenite and selenate during the sintering of copper selenide with soda ash

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 145, no. 4, 1962, 863-866

TEXT: The aim of the work was to find the conditions for sintering the sludge formed in the production of electrolytic copper with soda, under which the oxidation of the selenium produced would not exceed  $\text{Se}^{4+}$ . The calculation of the isobaric potential and equilibrium constant for the reactions  $\text{Cu}_2\text{Se} + \text{Na}_2\text{CO}_3 + 2\text{O}_2 = 2\text{CuO} + \text{Na}_2\text{SeO}_3 + \text{CO}_2$  (I);

$2\text{CuSe} + 2\text{Na}_2\text{CO}_3 + 5\text{O}_2 = 4\text{CuO} + 2\text{Na}_2\text{SeO}_4 + 2\text{CO}_2$  (II);  $2\text{CuSe} + 2\text{Na}_2\text{CO}_3 + 3\text{O}_2 = 2\text{CuO} + 2\text{Na}_2\text{SeO}_3 + 2\text{CO}_2$  (III);  $\text{CuSe} + \text{Na}_2\text{CO}_3 + 2\text{O}_2 = \text{CuO} + \text{Na}_2\text{SeO}_4 + \text{CO}_2$  (IV);  $\text{Ag}_2\text{Se} + \text{Na}_2\text{CO}_3 + \text{O}_2 = 2\text{Ag} + \text{Na}_2\text{SeO}_3 + \text{CO}_2$  (V);

Card 1/2

Thermodynamics, and experimental ...

S/020/62/145/004/023/024  
B101/B138

$2Ag_2Se + 2Na_2CO_3 + 3O_2 = 4Ag + 2Na_2SeO_4 + 2CO_2$  (VI) showed that they can all be realized between 573 and 1073°C. Heating of  $Cu_2Se$  with  $Na_2CO_3$  in the amount, corresponding to reaction I yielded the following results: at ~400°C,  $Se^{4+}$  and  $Se^{6+}$  formed in a ratio of about 1 : 1; at 600°C, intensive oxidation of Se sets in, the percentages of  $Se^{6+}$  and  $Se^{4+}$  were 74.54% and 11.29%, respectively, of the total Se content (the rest was volatilized); at 700°C, the  $Se^{4+}$  increased to 60.71%, but decreased to 33.15% at 800°C. Tests at 650°C with higher additions of soda showed that with 175% the amount required by equation I Se oxidation was delayed (52.45%  $Se^{4+}$ ), whereas with 400%, only 18.48%  $Se^{4+}$  was present. Hence, sintering gives optimum results at 650-700°C with 150-175% of soda. There are 4 tables.

ASSOCIATION: Ural'skiy politekhnicheskii institut im. S. M. Kirova (Ural Polytechnic Institute imeni S. M. Kirov)

SUBMITTED: March 20, 1962

Card 2/2

TISHCHENKO, A.A.

Selenium and tellurium recovery from the slimes of copper electrolysis.  
Sbor. nauch. trud. Ural. politekh. inst. no.134:27-31 '63.

(MIRA 17:1)



TISHCHENKO, A.A.; SMIRNOV, V.I.

Conditions of the formation of sodium selenites and sodium  
selenates during sintering with soda of silver and copper  
selenides. Zhur. prikl. khim. 36 no.11:2363-2367 N '63.

(MIRA 17:1)

BALAKIREV, V.F.; VETRENKO, Ye.A.; TISHCHENKO, A.A.; BABADZHAN, A.A.

Zinc passage from matte to the gaseous phase under the effect  
of converter blow. Trudy Inst. met. UFAN SSSR no.4:81-85 '58.  
(MIRA 12:10)

(Zinc--Metallurgy)

S/149/62/000/003/001/011  
A006/A101

AUTHORS: Tishchenko, A. A., Smirnov, V. I.

TITLE: Conditions of sodium selenite and selenate formation during sintering of silver selenide with soda ash

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Tsvetnaya metallurgiya, no. 3, 1962, 49 - 52

TEXT: There are not literature data available on theoretically founded conditions of sintering copper-electrolyte slurries with soda-ash in oxidizing atmosphere, concerning temperature and soda consumption. Since silver selenide is the basic selenium-containing component of the slurry, special investigations were made to reveal conditions of sodium selenite and selenate formation in sintering roasting of synthetic selenide, depending on temperature and soda consumption. The initial material for silver selenide synthesis was chemically pure silver nitrate and grade L-46 (TsMTU 37-46) selenium with 99.37% Se. Selenium oxidation to selenite and selenate was studied at temperatures from 300 - 850°C, and selenium oxidation at various  $\text{Na}_2\text{CO}_3 : \text{Ag}_2\text{Se}$  ratios was determined.

Card 1/2

Conditions of sodium selenite and...

3/149/62/000/003/001/011  
A006/A101

It was found that 650°C was the optimum temperature as regards minimum selenium loss in sintering roasting silver selenide with soda, and minimum formation of sodium selenate. Selenium is then oxidized by 73.16% to selenite and by 3.1% to selenate of sodium; selenium losses in the form of dioxide are 2.36%. Soda-ash consumption in sintering roasting should not exceed the double amount of the quantity theoretically needed for binding the singled-out selenium. Further increase of the soda consumption does not cause any substantial changes in the process of selenium oxidation. The formation of silver selenite and selenate was not observed under the experimental conditions. The results obtained can be used to improve the indices of sintering roasting of slurries from copper electrolysis. There are 2 tables.

ASSOCIATION: Ural'skiy politekhnicheskiy institut (Ural Polytechnic Institute)  
Kafedra metallurgii tyazhelykh metallov (Department of Metallurgy of Heavy Metals)

SUBMITTED: October 17, 1961

Case 2/2

Академия наук СССР, Уральский филиал. Институт металлургии

Труды, вып. 4 (Transactions of the Institute of Metallurgy, Ural Branch, Academy of Sciences, USSR) No. 4) Свердловск, 1958. 157 p. Kzeta  
allg inserted, 4,000 copies printed.

Editorial Board: E.A. Yezels (Chairman), Candidates of Technical Sciences;  
A.S. Mikhlinitskiy, Professor, Doctor; V.A. Miller, Professor; P.A. Pashnikov,  
Candidate of Technical Sciences; and S.S. Litavskiy, Candidate of Technical  
Sciences; Ed.: M.S. Kuznetsovskiy.

PURPOSE: This book is intended for ferrous and nonferrous metallurgists.

CONTENTS: The book presents results of investigations of theoretical problems in metallurgy and chemistry and gives information on the efficient use of raw materials in ferrous and nonferrous metallurgy and on the development of new production processes in the metallurgical and chemical industries. The articles were written by junior members and experienced specialists of the scientific staff of the Institutes of Metallurgy, Chemistry, and Electrochemistry, Ural Branch, Academy of Sciences, USSR.

Shardin, G.V., V.P. Sidorovskiy, and B.M. Lepitskiy. Electrical Resistance and Phase Composition of Briquetted Ilmenite During the Reducing-Boasting Process

Kozlov, G.A., and Ye.A. Yezelskiy. On the Connection Between the Kinetics of the Vaporization of Solids and the Pressure of Saturated Vapor

Pyndov, V.I., and M.P. Myer (Deceased). Behavior of Germanium During the Boasting of Salts of Germanium

Starov, L.M., and M.I. Kochnev. On the Behavior of the Lower Sulfides of Nickel and Cobalt

Starov, L.M., and M.I. Kochnev. Oxidation of the Lower Sulfides of Nickel and Cobalt

Chistyakov, M.Ye., and M.Y. Sidorov. Polarization of Beryllium-Oxide-Carbon Anodes in Fused Chlorides

Zimmerman, M.M., I.K. Gerasimov, and P.A. Pashnikov. Investigation of the Conditions for Electrodeposition of Copper from  $H_2SO_4$  Solutions in the Presence of Iron, Zinc, and Cadmium Cations and the Electric Anion

Friberg, L.V., V.A. Pashnikov, and I.K. Gerasimov. Some Prerequisites for the Electrolytic Production of Lead and Sn from Aqueous Chloride Solutions and Selection of Insoluble Anodes for Electrolysis

Kozlov, G.A. Some Peculiarities of the Reaction of Selenite with Soda and Lime During the Sintering Process

Kozlov, G.A., and S.I. Rimovskiy. Optimum Conditions for Leaching Soda Selenite Sinter Cubes

Mikhlinitskiy, A.G., and G.S. Kozlovskiy. Production of Metallic Sodium by Carbon Reduction of the Sulfate or Carbonate (Experimental Data)

Belokobyl, V.P., Ye.A. Yezelskiy, A.G. Mikhlinitskiy, and A.A. Nakhomov. On the Problem of the Leaching of Zinc from [Copper] Nails to the Gaseous Phase During Air Blast

Boyer, V.I., G.A. Yezelskiy, and M.P. Myer (Deceased). Comparative Data on the Carrying of Liquid into the (Reduction) Zone in an Experimental Converter

Rubtsov, V.V., B.G. Radinov, and V.I. Dushkov. On the Behavior of Oxides of Boron During the Metallurgical Treatment of Boron

Kapichuk, A.V., and V.P. Chernobrovkin. On the Melting and Overheating of Pig Iron in the Cupola

Kapichuk, A.V., and V.P. Chernobrovkin. Change in Chemical Composition and Heat Content of Pig Iron During Cupola Melting

Chernobrovkin, V.P., A.A. Dobryden', and V.I. Radinov. Phosphorus and Titanium in Foundry Pig Iron

Plimer, Th.L. On the Deposition of Perovskite from

Pokrov, A.G., and G.S. Kozlovskiy. Investigation of the Synthesis of Poly-1,3-Butadiene Glycol Resins and Styrene

Plotkina, N.I., and V.G. Pliginskaya. Production of Polyacetylene by Alkylation of Toluene with Olefins

Teterin, N.Ye., G.S. Kozlovskiy, and V.I. Radinov. On the Properties of Sintered Ilmenite

GRINEVA, N.I.; TISHCHENKO, A.D.; UFIMTSEV, V.N.

Dyes for acetate silk and synthetic fibers. Part 3: Oxidation of  
styrene and dimethinecyanine dyes, derivatives of indoline. Zhur.-  
ob.khim. 32 no.6:1919-1922 Je '62. (MIRA 15:6)

1. Nauchno-issledovatel'skiy institut organicheskikh polproduktov  
i krasiteley.

(Dyes and dyeing—Rayon) (Indoline)

TISHCHENKO, A.F.

Parallel calculation of paper by weight and by area is needed.  
Bum. prom. 36 no.11:11 N '61.. (MIRA 15:1)

1. Nachal'nik bumazhnoy fabriki Zhidachevskogo kombinata.  
(Paper industry--Accounting)

TISHCHENKO, A.F.

Analysis of the pulp grinding process. Bum. prom. 36 no.12:  
17-18 D '61. (MIRA 15:1)

1. Zhidachevskiy kartonno-bumazhnyy kombinat.  
(Papermaking machinery)



TISHCHENKO, A.F.; TRET'YAKOV, V.L.

Production of chemical woodpulp from aspen at the Zhidakov Cardboard and Paper Combine. Bum. i der. prom. no.3:21-24 J1-S '63.  
(MIRA 17:2)

TISHCHENKO, A.F.

Extending the life of papermaking machine screens. Bum. 1 der. prom.  
no.2:42-43 ~~Ap-Je~~ '63. (MIRA 17:2)

TISHCHENKO, A.F., inzh.-tekhnolog; KOVRIZHKINA, M.Ya., inzh.-tekhnolog

Recovery of fiber by means of a wire save-all filter. Bum.  
prom. 35 no.5:14-16 My '60. (MIRA 13:7)

1. Zhidachevskiy kartonno-bumazhnyy kombinat.  
(Zhidachev--Paper industry--Equipment and supplies)  
(Filters and filtration)

~~TISHCHENKO~~ HENKO, A.F.; KOVRIZHKINA, M.Ya.

Utilization of centrifugal cleaners for processing the stock  
in front of the paper machine. Bum. prom. 36 no.10:18-19 0 '61.  
(MIRA 15:1)

1. Bumazhnaya fabrika Zhidachevskogo kombinata.  
(Papermaking machinery)

ACC NR: AP7002683

SOURCE CODE: UR/0247/66/016/006/0974/0983

AUTHOR: Popov, V.A.; Simonov, P.V.; Tishchenko, A.G.; Prolov, M.V.;  
Khachatur'yants, L.S.

ORG: none

TITLE: Analysis of the intonational characteristics of speech as an  
index of emotional state in humans under spaceflight conditions

SOURCE: Zhurnal vysshey nervnoy deyatel'nosti, v. 16, no. 6, 1966,  
974-983

TOPIC TAGS: manned space flight biotelemetry, bioastronautics,  
psychologic stress, speech analysis, emotional tension, emotion, space  
psychology, human engineering, speech spectrum ~~Logistics~~

ABSTRACT: A method is described for analyzing the spectral characteristics of  
speech (frequency, intensity of articulatory components) which can serve  
as a reliable index of emotional state. Increased emotional tension is  
accompanied by increases in articulatory frequency  $F$  and signal intensity  
 $A$ , i.e., by an increase in the moment of articulation  $M_F = A \cdot F$ . Monitoring  
of sympathetic indices (pulse, respiration, etc.) concurrently with the  
parameter  $M_F$  provides a more reliable evaluation of operator state and  
permits differentiation of physical from emotional tension. Human

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UDC: 612.821

ACC NR: AP7002683

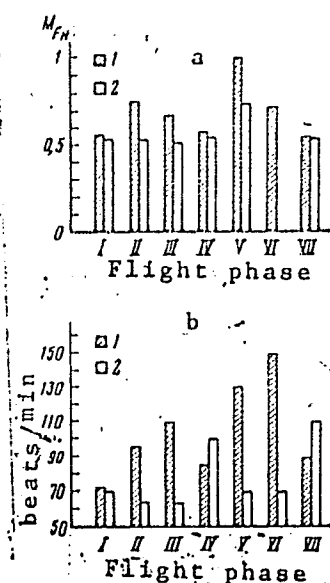


Fig. 1. Comparison of indices of emotional state (speech characteristic and pulse rate) of Leonov during spaceflight and preflight rehearsal

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ACC NR: AP7002683

emotions modeled by Stanislavski-method actors were used to check the speech intonation analysis method. Considerable changes in the actors' heart rhythms during these tests attest to the presence of genuine emotion. The method described was used for actual determination of A. A. Leonov's emotional state during his EVA on the Voskhod-2 flight. The cosmonaut's physical strain was successfully differentiated from emotional tension. A graph is given comparing results obtained for a) the speech characteristic  $M_f$ , and b) pulse rate at various stages of 1) actual flight, and 2) thermal pressure chamber rehearsals. Computer analysis will permit more exact correlation of the spectral characteristics of speech sounds with various degrees of positive and negative emotions.

SUB CODE: 06, 05/ SUBM DATE: 14Jun66/ ORIG REF: 007/ OTH REF: 004  
ATD PRESS: 5113

Card 3/3

ZADOROVNYY, V.G.; KACHKAROV, I.A.; KOZLOV, A.A.; LICHENINS, A.G.

Industrial adoption of the flotation of titanium-bearing  
placer sands. Tsvet. met. 98 no.8:7-12 Ag '66.

(MIA 18:9)



UL'MAN, V.G.; TISHCHENKO, A.G.; BOREYKO, Ye.Ye.

Automatic control of coke weight charged into a blast furnace.  
Avtom. i prib. no. 1:7-9 Ja-Mr '64. (MIPA 17:5)

TISHCHENKO, A.G., kand.tekhn.nauk

Device for the transfer of granulated materials in the fluidized-bed multiple-cell heaters. Khim.mashinostr. no.1:12-14 Ja-F '64.

TISHCHENKO, A. I. [Tyshchenko, A. I.].

Lever tap for hydraulic drills. Mekh. sil'. hosp. 9 no.1:31 Ja '58.  
(MIRA 11:2)

1. Golovniy inzhener Ivanovs'koi mashinno-traktornoj stantsii,  
Krim'skoi oblasti.

(Drilling and boring machinery)

"APPROVED FOR RELEASE: 07/16/2001

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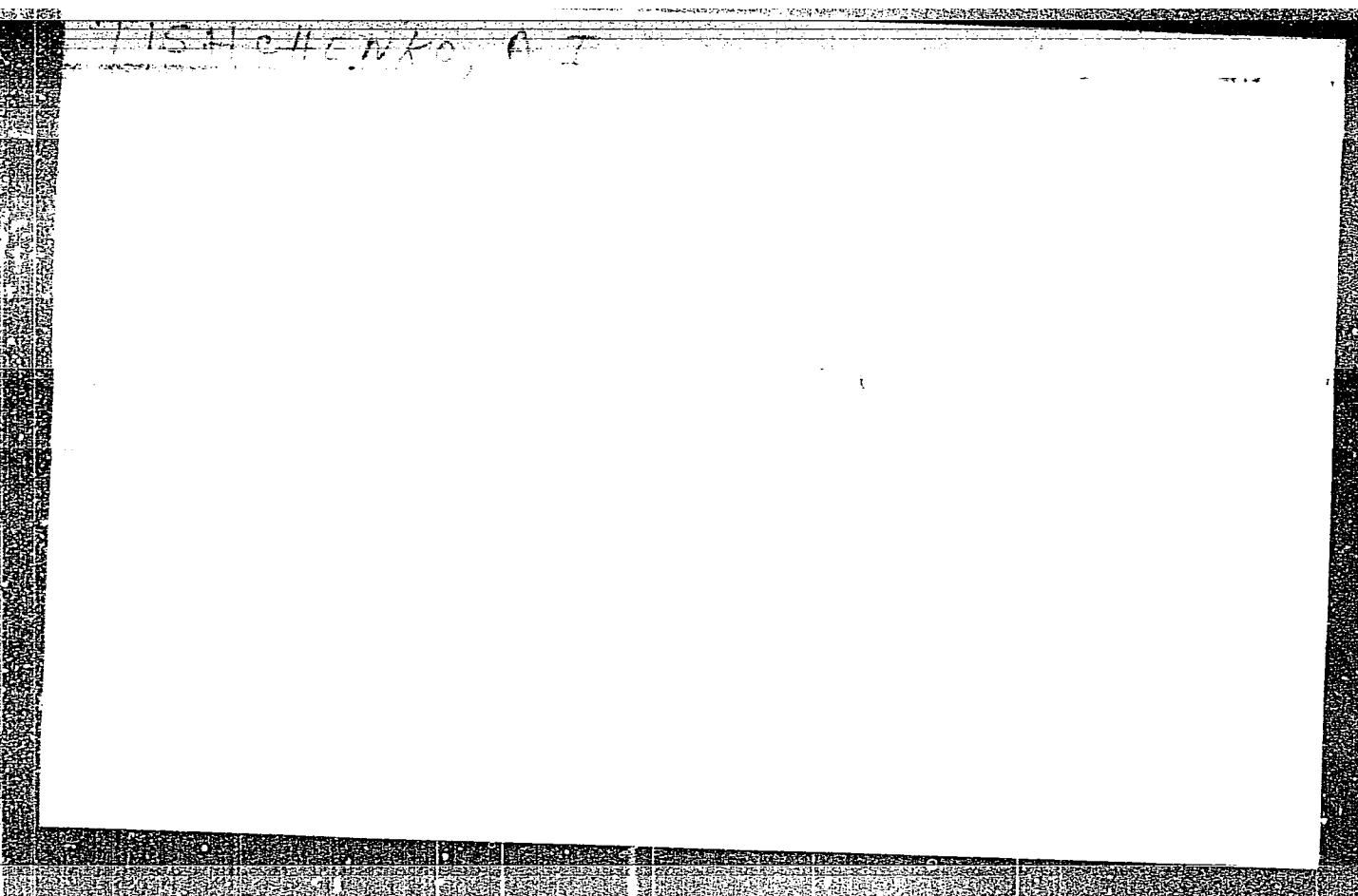
ISHCHENKO, A. I.

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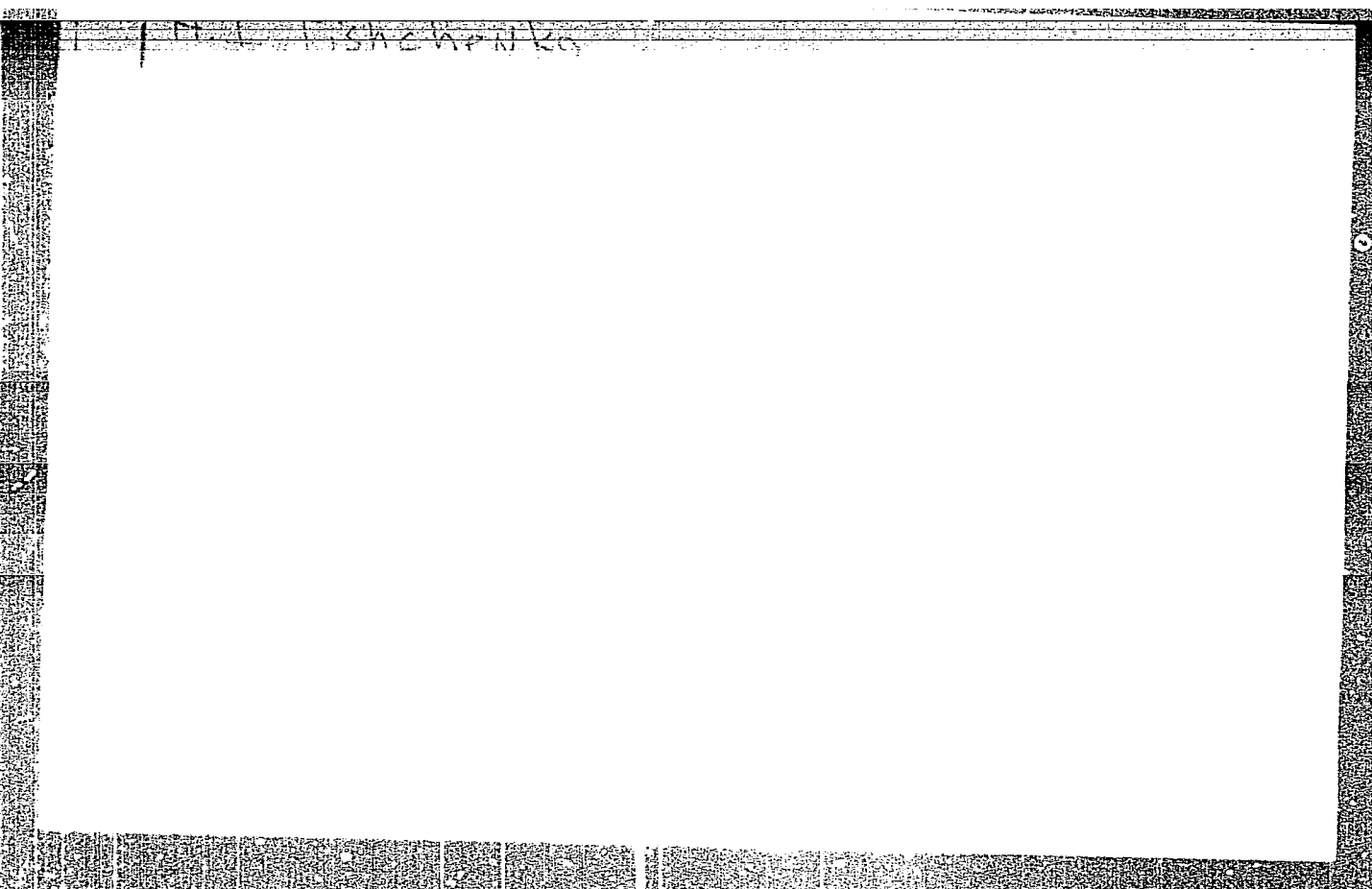


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TISHCHENKO, A.I.,  
SHESTAKOV, V.V., Lt. Col. Med., Serv., GREKOV, P.M., Maj. Med. Serv.,  
DAVYDOVICH, S.Ya., Capt. Med. Serv., TISHCHENKO, A.I., Sr. Lt. Med. Serv.

"Prevention and Treatment of Acute Catarrh of Upper Respiratory Tracts,"  
Voyenno-Meditsinskiy Zhurnal, No. 8, August 1957.

SHESTAKOV, V.V., podpolkovnik meditsinskoy sluzhby; GREKOV, P.M., mayor  
meditsinskoy sluzhby; DAVYDOVICH, S.Ya., kandidat meditsinskoy sluzhby;  
TISHCHENKO, A.I., starshiy leytenant meditsinskoy sluzhby

Prevention and treatment of acute catarrh of the upper respiratory  
tract. Voen.-med.zhur. no.8:79-81 Ag '57. (MIRA 10:12)  
(RESPIRATORY ORGANS--DISEASES)



ACC NR: AP6011673

SOURCE CODE: UR/0209/66/000/004/0017/0019

AUTHOR: Tishchenko, A. (Captain in medical corps )

ORG: none

TITLE: Steps along craters (training humans to walk on the moon)

SOURCE: Aziatsiya i kosmonavtika, no. 4, 1966, 17-19

TOPIC TAGS: cosmonaut training, lunar locomotion, lunar trainer, training device

ABSTRACT: It is anticipated that because lunar gravity is only 1/6 of that of the Earth, locomotion by man on the moon's surface will be radically altered. Calculations show that conditions for walking or running on the surface of the moon will be unfavorable. Man will be able to jump as high as 2.5—3.0 m or as far as 5—10 m. Assuming the lunar surface is hard, maximum running speed will be 13—15 km/hr. If the surface is not hard, this speed will be reduced to 5 km/hr. It is therefore felt that jumping will be the most desirable mode of locomotion on the moon. For this reason, the movement of the hands will be most important for maintaining equilibrium. Altered biomechanics of movement will lead to altered visual and motor coordination. On Earth, man must look ahead 3—4 m when walking; on the lunar surface, this distance will increase to 15 m due to the increase in distances covered. It is thus necessary to train cosmonauts for these altered lunar conditions. The author suggests that lunar gravity can be simulated by using devices which exert a 5/6 G force on the body,

Card 1/2

L 23050-66 FSS-2/EWT(1)/EWP(m)/EEC(k)-2 TT/DD/ENS/GW

ACC NR: AP6011673

SOURCE CODE: UR/0209/66/000/004/0017/0019

AUTHOR: Tishchenko, A. (Captain in medical corps )

ORG: none

TITLE: Steps along craters (<sup>2</sup>training humans to walk on the <sup>2</sup>moon) B

SOURCE: Aziatsiya i kosmonavtika, no. 4, 1966, 17-19

TOPIC TAGS: . cosmonaut training, lunar locomotion, lunar trainer, training device

ABSTRACT: It is anticipated that because lunar gravity is only 1/6 of that of the Earth, locomotion by man on the moon's surface will be radically altered. Calculations show that conditions for walking or running on the surface of the moon will be unfavorable. Man will be able to jump as high as 2.5—3.0 m or as far as 5—10 m. Assuming the lunar surface is hard, maximum running speed will be 13—15 km/hr. If the surface is not hard, this speed will be reduced to 5 km/hr. It is therefore felt that jumping will be the most desirable mode of locomotion on the moon. For this reason, the movement of the hands will be most important for maintaining equilibrium. Altered biomechanics of movement will lead to altered visual and motor coordination. On Earth, man must look ahead 3—4 m when walking; on the lunar surface, this distance will increase to 15 m due to the increase in distances covered. It is thus necessary to train cosmonauts for these altered lunar conditions. The author suggests that lunar gravity can be simulated by using devices which exert a 5/6 G force on the body, 2

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L 23050-66

ACC NR: AP6011673

e.g., training in a gas heavier than air, in fluids, or using spring devices. The suspension of trainees from wires to produce 1/6 G is also mentioned. Visual training could be accomplished by imitating lunar movements on a screen made of glass or plastic with a dull surface. Beneath the screen, a picture of terrain or black and white spots and stripes would be situated. The projector motor would move the picture of the terrain towards the trainee at a rate corresponding to the force exerted by his feet. The "distance" covered by the trainee would correspond to lunar conditions. Such a training device would be useful for training lunar visual and motor coordination and for accelerating the development of habits upon arrival on the moon. A final mode of training would involve a propulsion knapsack attached to the trainee's back and exerting a lifting force of 5/6th G. It is concluded that while a complete analogy of lunar conditions for locomotion is impossible, the various visual and physical training approaches enumerated can help to accelerate man's adaptation to lunar conditions. Orig. art. has: 1 figure. [CD]

SUB CODE: 05, 06/ SUBM DATE: none/ ATD PRESS: 4234

Card 2/2 *EV*

BENESHEVICH, I.I., kandidat tekhnicheskikh nauk; BOGIN, N.M., kandidat tekhnicheskikh nauk; BYKOV, Ye.I., inzhener; VLASOV, I.I., kandidat tekhnicheskikh nauk; GRITSEVSKIY, M.Ye., inzhener; GRUBER, L.O., inzhener; GURVICH, V.G., inzhener; DAVYDOV, V.H., inzhener; YER-SHOV, I.M., kandidat tekhnicheskikh nauk; ZASORIN, S.N., kandidat tekhnicheskikh nauk; IVANOV, I.I., kandidat tekhnicheskikh nauk; KRAUKLIS, A.A., inzhener; KROTOV, L.B., inzhener; LAPIN, V.B., inzhener; LASTOVSKIY, V.P., dotsent; LATUNIN, N.I., inzhener; MARKVARDT, K.G., professor, doktor tekhnicheskikh nauk; MAKHAYLOV, M.I., professor, doktor tekhnicheskikh nauk; NIKANOROV, V.A., inzhener; OSKOLKOV, K.N., inzhener; OKHOSHIN, L.I., inzhener; PARFENOV, K.A., dotsent, kandidat tekhnicheskikh nauk; PERTSOVSKIY, L.M., inzhener; POPOV, I.P., inzhener; PORSHNEV, B.G., inzhener; RATNER, M.P., inzhener; ROSSIYEVSKIY, G.I., dotsent, kandidat tekhnicheskikh nauk; RYKOV, I.I., kandidat tekhnicheskikh nauk; RYSHKOVSKIY, I.Ya., dotsent, kandidat tekhnicheskikh nauk; RYABKOV, A.Ya., professor [deceased]; TAGER, S.A., kandidat tekhnicheskikh nauk; KHAZEN, M.M., professor, doktor tekhnicheskikh nauk; CHERNYSHEV, M.A., doktor tekhnicheskikh nauk; KBIN, L.Ye., professor, doktor tekhnicheskikh nauk; YURENEV, B.N., dotsent; AKSENOV, I.Ya., dotsent, kandidat tekhnicheskikh nauk; ARKHANGEL'SKIY, A.S., inzhener; BARTENEV, P.V., professor, doktor tekhnicheskikh nauk; BERNGARD, K.A., kandidat tekhnicheskikh nauk; BOROVOY, N.Ye., dotsent, kandidat tekhnicheskikh nauk; BOGDANOV, I.A., inzhener; BOGDANOV, N.K., kandidat tekhnicheskikh nauk; VINNICHENKO, N.G., dotsent, kandidat ekonomicheskikh nauk;

(Continued on next card)